

ABSTRACT

A method is provided for preventing upstream infiltration of a contaminant from a vessel into a detonative cleaning apparatus. At least between detonation cycles of the apparatus, a pressurized gas is introduced to the combustion conduit effective to substantially resist upstream infiltration of the contaminant. The method may be implemented via a flange apparatus having first and second faces, an inboard surface bounding a central aperture, and an outboard perimeter. The apparatus has a channel with at least a first port outboard of the inboard surface in communication with the channel. At least one second port in the inboard surface is in communication with the channel. The gas may be introduced through the first port and discharged from the second port.